UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,288	03/03/2005	Wolfgang Heuer	10191/3612	5682

26646 7590 11/29/2006

KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER	
CHAU, COREY P	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/501,288	HEUER, WOLFGANG	
	Examiner	Art Unit	
	Corey P. Chau	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-22,25,27 and 29-35* is/are rejected.

7)☒ Claim(s) *23-24, 26, and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/9/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 34 is objected to because of the following informalities: on line 1, recites "The method as recited in claim 30", should be replaced with "The method as recited in claim 31". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 28 recites the limitation "the rectifier" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 18-19 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5548650 to Clark.

7. Regarding Claim 18, Clark discloses a diagnostic circuit for a treble loudspeaker of a loudspeaker combination, the diagnostic circuit (Fig. 1), comprising:

a high frequency (HF) signal-generating device configured to output an HF voltage signal (Figs. 1-3; column 3, line 40 to column 4, line 49);

at least one terminal for the loudspeaker combination (Figs. 1-3; column 4, lines 20-49);

a measuring resistor that, upon connection of the loudspeaker combination to the terminal, forms therewith a voltage divider circuit (Figs. 1-3; column 4, lines 29-49; column 6, lines 20-32); and

a measurement device configured to measure a complex measured voltage drop in the voltage divider circuit and to ascertain a condition of the treble loudspeaker of the loudspeaker combination (abstract; Fig. 1-3; column 4, lines 29-49; column 6, lines 20-32).

8. Regarding Claim 19, Clark discloses the measuring resistor is between the HF signal-generating device and the terminal, and the measurement device measure a measured voltage drop substantially at the loudspeaker combination (abstract; Fig. 1-3; column 4, lines 29-49; column 6, lines 20-32).

9. Regarding Claim 30, Clark discloses the measuring resistor is a purely ohmic resistor (abstract; Fig. 1-3; column 4, lines 29-49; column 6, lines 20-32).

10. Claim 31 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

11. Regarding Claim 32, Clark discloses the measured voltage is measured as a voltage drop at the loudspeaker combination (abstract; Fig. 1-3; column 4, lines 29-49; column 6, lines 20-32).

12. Claims 18-19, 25, 27, 30-32, and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4330686 to Roe.

13. Regarding Claim 18, Roe discloses a diagnostic circuit for a treble loudspeaker of a loudspeaker combination, the diagnostic circuit, comprising:

a high frequency (HF) signal-generating device configured to output an HF voltage signal (abstract; Figs. 1-2; column 2, lines 29-68);

at least one terminal for the loudspeaker combination (Fig. 1);

a measuring resistor that, upon connection of the loudspeaker combination to the terminal, forms therewith a voltage divider circuit (Figs. 1-2; column 2, line 53 to column 3, line 41); and

a measurement device configured to measure a complex measured voltage drop in the voltage divider circuit and to ascertain a condition of the treble loudspeaker of the loudspeaker combination (Figs. 1-2; column 2, line 53 to column 3, line 68).

14. Regarding Claim 19, Roe discloses the measuring resistor is between the HF signal-generating device and the terminal, and the measurement device measure a measured voltage drop substantially at the loudspeaker combination (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

15. Regarding Claim 25, Roe discloses the measurement device is configured to ascertain a peak value of the measured voltage (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

16. Regarding Claim 27, Roe discloses the measurement device includes a rectifier circuit configured to rectify the measured voltage and output a rectified measured voltage signal to an evaluation device (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

17. Regarding Claim 30, Roe discloses the measuring resistor is a purely ohmic resistor (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

18. Claim 31 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

19. Regarding Claim 32 , Roe discloses the measured voltage is measured as a voltage drop at the loudspeaker combination (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

20. Regarding Claim 34, Roe discloses a peak value of the complex measured voltage is measured and subsequently evaluated (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

21. Regarding Claim 35, Roe discloses the complex measured voltage is rectified and subsequently evaluated (abstract; Figs. 1-2; column 2, line 53 to column 3, line 68).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

23. Claims 18-22, 25, 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3989908 to Budrys et al. (hereafter as Budrys).

24. Regarding Claim 18, Budrys discloses speaker supervision in a public address system, comprising speakers, but does not expressly discloses a treble loudspeaker. However, the examiner takes Official Notice that it is well known in the art that a loudspeaker system can include a treble speaker in order to produce the desired acoustic environment. Therefore it would have been obvious to one having ordinary skill in the art to modify Budrys to include a treble speaker in the public address system of Budrys in order to produce the desired acoustic environment.

Therefore, Budrys as modified discloses:

a diagnostic circuit for a treble loudspeaker of a loudspeaker combination, the diagnostic circuit, comprising:

a high frequency (HF) signal-generating device configured to output an HF voltage signal (Figs. 1-2; column 1, line 64 to column 2, line 13);

at least one terminal for the loudspeaker combination (Figs. 1-2);

a measuring resistor that, upon connection of the loudspeaker combination to the terminal, forms therewith a voltage divider circuit (Figs. 1-2; column 2, line 61 to column 3, line 33; column 3, line 63 to column 4, line 8); and

a measurement device configured to measure a complex measured voltage drop in the voltage divider circuit and to ascertain a condition of the treble loudspeaker of the loudspeaker combination (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8).

25. Regarding Claim 19, Budrys as modified discloses the measuring resistor is between the HF signal-generating device and the terminal, and the measurement device measure a measured voltage drop substantially at the loudspeaker combination (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8).

26. Regarding Claim 20, Budrys as modified discloses a capacitor connected between the measuring resistor and the terminal (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8).

27. Regarding Claim 21, Budrys as modified the HF signal-generating device includes an HF signal source configured to output an HF input signal, and a downstream impedance converter that is configured to be switched on by a DC voltage diagnostic signal (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

28. Regarding Claim 22, Budrys as modified discloses the impedance converter includes an emitter follower transistor that is configured to receive the HF input signal and the diagnostic signal (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8).

29. Regarding Claim 25, Budrys as modified discloses wherein the measurement device is configured to ascertain a peak value of the measured voltage (Figs. 1-2;

column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

30. Regarding Claim 29, Budrys as modified discloses the measurement device is configured to deduce a short circuit of the treble loudspeaker when a low measured voltage is ascertained, a correct condition of the treble loudspeaker from a moderate measured voltage, and an interruption at the treble loudspeaker from a high measured voltage (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

31. Regarding Claim 30, Budrys as modified discloses the measuring resistor is a purely ohmic resistor (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

32. Claim 31 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

33. Regarding Claim 32, Budrys as modified discloses the measured voltage is measured as a voltage drop at the loudspeaker combination (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

34. Regarding Claim 33, Budrys as modified discloses a short circuit at the treble loudspeaker is deduced when a low measured voltage is ascertained at the loudspeaker combination, a correct condition of the treble loudspeaker is deduced when a moderate measured voltage is ascertained at the loudspeaker combination, and an interruption at the treble loudspeaker is deduced when a high measured voltage is

ascertained at the loudspeaker combination (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

35. Regarding Claim 34, Budrys as modified a peak value of the complex measured voltage is measured and subsequently evaluated (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

36. Regarding Claim 35, Budrys as modified discloses the complex measured voltage is rectified and subsequently evaluated (Figs. 1-2; column 2, line 61 to column 3, line 41; column 3, line 63 to column 4, line 8; column 4, lines 26-47).

Allowable Subject Matter

37. Claims 23-24, 26, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5255324 to Brewer et al. discloses a digitally controlled audio amplifier with voltage limiting.

USPN 5345510 to Singhi et al. discloses an integrated speaker supervision and alarm system.

USPN 4583245 to Gelow et al. discloses a speaker system protection circuit.

USPN 4887298 to Haigler discloses an electronic circuit for sensing disconnect or failure of a power output sense line in an audio power system.

USPN 5847610 to Fujita discloses a protection circuit for an audio amplifier.

USPN 3912883 to Goodyear discloses a direct current supervisory system.

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 20, 2006
CPC

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600